



Designation: D6015 – 21

Standard Test Method for Static Water Absorption of Leather¹

This standard is issued under the fixed designation D6015; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon (ε) indicates an editorial change since the last revision or reappraisal.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This test method covers the determination of the amount of water absorbed by leather at $23\text{ °C} \pm 2\text{ °C}$ by immersion under static conditions. It may be used on all types of leather. This test method does not apply to wet blue or wet white.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D1517 Terminology Relating to Leather

D1610 Practice for Conditioning Leather and Leather Products for Testing

D2813 Practice for Sampling Leather for Physical and Chemical Tests

3. Terminology

3.1 For definitions of leather terms used in this test method refer to Terminology **D1517**.

¹ This test method is under the jurisdiction of ASTM Committee **D31** on Leather and is the direct responsibility of Subcommittee **D31.03** on Footwear.

Current edition approved Dec. 1, 2021. Published January 2022. Originally approved in 1996. Last previous edition approved in 2014 as D6015 - 14. DOI: 10.1520/D6015-21.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

4. Summary of Test Method

4.1 In this test method the amount of water absorbed by a leather specimen is measured at room temperature with all surfaces exposed to water.

5. Significance and Use

5.1 This test method is used to determine compliance with specifications for water absorption of upper leather. The significance of the test method is limited by the static conditions employed, and the results do not reflect the water absorption under dynamic conditions of flexing.

6. Apparatus

6.1 *Beaker*, 1000 mL.

6.2 *Balance*, sensitive to 0.01 g.

6.3 *Blotting Paper*.³

6.4 *Timer*.

6.5 *1000 g of weight*.

7. Test Specimen

7.1 When taking test specimens from skins or hides refer to Practice **D2813**.

7.2 The test specimen shall be a square of leather approximately 4 in. by 4 in. (102 mm by 102 mm).

7.3 Unless otherwise specified in the detail specification, one specimen from each test unit of sample shall be tested.

7.4 Prior to testing, the specimen shall be conditioned according to Practice **D1610**.

8. Procedure

8.1 Weigh the specimen to the nearest 0.01 g and record the mass as W_1 .

8.2 One to three specimens shall be completely immersed in a 1000 mL beaker of distilled water at $23\text{ °C} \pm 2\text{ °C}$. This

³ Blotting paper suitable to meet requirements of this method can be purchased at either: AATCC, Order #08344a, P.O. Box 12215, Research Triangle Park, NC 27709-2215, www.aatcc.org or Testfabrics Inc., P.O. Box 26, West Pittston, PA 18643, www.testfabrics.com.